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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/580,644

05/03/2007

Andrew Holmes

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EXAMINER

SALONE, BAYAN

ART UNIT

PAPER NUMBER

3726

NOTIFICATION DATE

DELIVERY MODE

03/19/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptocorrespondence@austin-rapp.com

Office Action Summary	Application No. 10/580,644	Applicant(s) HOLMES, ANDREW	
	Examiner BAYAN SALONE	Art Unit 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/03/2007</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed limitations of Claim 7 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation " *the desired reduction in depth of the finished cellular beam*" in the last two lines of the claim. There is insufficient antecedent basis for this limitation in the claim. The claim language only addresses specific steps being performed on *the universal beam* and fails to establish an initial cellular beam or finished universal beam that is produced as a result of the process. Furthermore, applicant needs to amend claim 1 significantly in an effort to accurately claim the invention. For example, while it is clear from Figure 3 of the drawings that the resulting cellular beam (a) actually has a depth which is smaller than the depth of the original

beam (b), this is not the case for the embodiment of Figure 2. As shown in Figure 2, the depth of the cellular beam (a) is actually increased relative to the depth of the original beam (b). Does applicant intend for claim 1 to only cover the Figure 3 embodiment?

Claims 2 and 9 recite the limitation "wherein *the depth of the finished cellular beam* is less than that of the universal beam from which it is produced ". There is insufficient antecedent basis for these limitations in the claim. As previously stated; the claim only claims the process being performed on *the universal beam* and fails to make mention of an initial cellular beam or finished universal beam that is produced as a result of the process.

Claims 3 and 4 recite "*the cut* along the web". There is insufficient antecedent basis for this limitation in the claim. It is unclear as to whether the applicant is referring to the first cut or the second cut of claim 1. It is suggested that the claims be amended to specify whether the applicant is referring to the first cut or the second cut.

Claim 5 recites the limitation "wherein *the beams* are separated". There is insufficient antecedent basis for this limitation in the claim. Claim 1 states that only the cut halves of *the universal beam* are separated. There is no mention of multiple beams that are separated.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Diamond (US Patent No. 2,990,038).

3. Regarding Claim 1, Diamond discloses a method of producing a structural beam (71) with openings located in the web (38), which comprises the steps of taking a universal beam (30), making a cut (42) (i.e. in a direction opposite of the first cut) generally longitudinally along the web (38) thereof, making a second cut (48) along the web (38) on a path differing from the first path of the first cut (42), separating the cut halves (64, 66) of the beam (30), and welding the halves (64, 66) together, characterized in that: a width of material or ribbon is defined by the two cuts (42, 48) of an amount equal to the desired reduction in depth (the space shown between the cuts made to remove the ribbon of material effectively reduces the depth of the beam, versus the beam being cut wherein no material is removed; see Figs. 9 and 10) of the finished cellular beam (71) (Col. 3, Line 9-Col. 4, Line 12, Figs. 6-11).

4. Regarding Claim 5, Diamond discloses a method according to claim 1, wherein the beams are separated and moved longitudinally relative to one another before being welded together (Col. 3, Lines 63-67).

5. Regarding Claims 8 and 9, it is noted that these claims are product-by-process claims. Product-by-process claims are not limited to the manipulations of recited steps, only the structure implied by the steps. See MPEP 2113 *Product-by Process claims*. Diamond discloses a finished cellular beam (71) comprised of two structural beam halves welded together (Col. 3, Lines 63-70, Fig. 11).

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6. Claims 1, 3-5, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Walker (US Patent No. 4,894,898).

7. Regarding Claim 1, Walker discloses a method of producing a structural beam with openings located in the web, which comprises the steps of taking a universal beam (10), making a cut (18) generally longitudinally along the web thereof, making a second cut (20) along the web on a path differing from the first path of the first cut (18), separating the cut halves of the beam, and welding the halves together, characterized in that: a width of material or ribbon (22, 23) is defined by the two cuts (18, 20) of an amount equal to the desired "reduction in depth" (the spaces 22 and 23 shown between the cuts (18, 20) made to remove the ribbon of material effectively reduces the depth of the beam, versus the beam being cut wherein no material is removed; see Figs. 1A and 1B) of the finished cellular beam (Col. 2, Line 49-Col. 3, Line 10, Figs. 1A and 1B).

8. Regarding Claims 3 and 4, the aforementioned rejection as applied to claim 1 remains as previously applied. Walker discloses a method wherein the cuts along the web (18, 20) can be such that any shape of openings (Col. 3, Lines 38-41, Figs. 2A and 3A) and any position of the openings can be obtained (Col. 4, Lines 18-26, Figs. 2A-4B).

9. Regarding Claim 5, Walker discloses a method according to claim 1, wherein the halves of the beam are separated and moved longitudinally relative to one another before being welded together (Col. 3, Lines 5-10, Figs. 1A and 1B).

10. Regarding Claims 8 and 9, it is noted that these claims are product-by-process claims. Product-by-process claims are not limited to the manipulations of recited steps,

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only the structure implied by the steps. See MPEP 2113 *Product-by Process claims*.

Walker discloses a finished cellular beam (10) comprised of two structural beam halves welded together (Col. 2, Line 49-Col. 3, Line 10, Figs. 1A and 1B).

11. Claims 1, 2, 6, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by either Townsend (US Patent No. 2,277,615), Nilsson (US Patent No. 5,725,247), or Booher (US Patent No. 4,586,646).

12. Regarding Claims 1, 2, 6, 8 and 9, Townsend discloses a method of forming a structural beam (A) with openings located in the web (the openings being the channels defined on either side of the beam by the I-shaped cross-section), which comprises the steps of taking a universal beam (A) making a cut (along surface 24) generally longitudinally along the web (12) thereof, making a second cut (along surface 25) along the web (12) on a path differing from the first path of the first cut, separating the cut halves (19, 20) of the beam (A) from the interior cut portion, and welding the halves together, characterized in that: a width of material or ribbon (18) is defined by the first and second cuts of an amount equal to the desired "reduction in depth" of the finished cellular beam; wherein the depth of the finished beam is less than that of the original beam (A) from which it is produced and wherein the two halves (19, 20) of the cut beam (A) are not moved longitudinally relative one another before being welded together (Col. 2, Line 14-Col. 4, Line 10, Figs. 4 and 5).

13. Regarding Claims 1, 2, 6, 8 and 9, Nilsson discloses a method of forming a structural beam (7) with openings (20, 21) located in the web, which comprises the steps of taking a universal beam (2) making a cut (13) generally longitudinally along the

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web (3) thereof, making a second cut (14) along the web (12) on a path differing from the first path of the first cut (13), separating the cut halves (10, 11) of the beam (7) from the cutout portion defined by the first and second cuts, and welding the halves together, characterized in that: a width of material or ribbon (a wedge shaped recess) is defined by the two cuts (13, 14) of an amount equal to the desired "reduction in depth" of the finished cellular beam (7); wherein the depth of the finished beam is less than that of the original beam (2) from which it is produced and wherein the two halves (10, 11) of the cut beam (2) are not moved longitudinally relative one another before being welded together (Col. 1, Lines 9-20 and Col. 2, Line 39-Col. 3, Line 29, Figs. 1, 4 and 5).

14. Regarding Claims 1, 2, 6, 8 and 9, Booher discloses a method of forming a structural beam (74), with openings (71) located in the web, which comprises the steps of taking a universal beam, making a cut (72) generally longitudinally along the web (12) thereof, making a second cut (73) along the web (51) on a path differing from the first path of the first cut (72), separating the cut halves (41, 46) of the beam, and welding the halves together, characterized in that: a width of material or ribbon is defined by the two cuts (72, 73) of an amount equal to the desired "reduction in depth" of the finished cellular beam (74); wherein the depth of the finished beam is less than that of the original beam from which it is produced and wherein the two halves (41, 46) of the cut beam are not moved longitudinally relative one another before being welded together (Col. 4, Lines 10-64, Figs. 1, 10 and 11).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walker (US Patent No. 4,894,898).

17. Regarding Claim 7, the aforementioned rejection as applied to claim 1 remains as previously applied. Walker does not explicitly disclose wherein two or more universal beams are cut and separated into halves and the halves from different cut universal beams are used to produce asymmetrical cellular beams. However Walker does disclose a method wherein a universal beam is cut and separated into halves and the halves are rotated to produce an asymmetrical cellular beam (Col. 4, lines 9-29, Figs. 5A and 5B). It would have been obvious to one of ordinary skill in the art at the time of invention to cut and separate multiple universal beams into halves, the halves then taken from different cut universal beams and used to produce asymmetrical cellular beams, since one of ordinary skill in the art would have realized that such a process is essentially equivalent to that disclosed by Walker, and the selection of either process would have been an obvious matter of design choice.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BAYAN SALONE whose telephone number is (571)270-7739. The examiner can normally be reached on M-Th, 7:30 AM-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571)-272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BAYAN SALONE/
Examiner, Art Unit 3726

/DAVID P. BRYANT/
Supervisory Patent Examiner, Art Unit 3726